Vydyne® R550H NT453

PA66-GF50 Ascend

Product Texts

Vydyne R550H NT453 is a general purpose, 50% glass-filled, heat-stabilized PA66 based resin designed for injection molding applications. R550H NT453 offers standard flow with a natural surface finish and maintains the excellent resistance typical of PA66 in chemicals, machine and motor oils, solvents, and gasoline.

Processing/Physical Characteristics	dry / cond	Unit	Test Standard
ISO Data			
[C] Molding shrinkage, parallel	**0.3 / ***	%	ISO 294-4, 2577
[C] Molding shrinkage, normal	**0.8 / ***	%	ISO 294-4, 2577

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Tensile Modulus	**16800 / 12600**	MPa	ISO 527
[C] Stress at break	**240 / 180**	MPa	ISO 527
[C] Strain at break	**2.5 / 3.5**	%	ISO 527
Flexural modulus, 23°C	**16000 / 11200**	MPa	ISO 178
Flexural strength	**350 / 270**	MPa	ISO 178
[C] Charpy impact strength, +23°C	**95 / 110**	kJ/m²	ISO 179/1eU
[C] Charpy impact strength, -30°C	**91 / 95**	kJ/m²	ISO 179/1eU
[C] Charpy notched impact strength, +23°C	**15 / 21**	kJ/m²	ISO 179/1eA
[C] Charpy notched impact strength, -30°C	**14 / 15**	kJ/m²	ISO 179/1eA
Izod notched impact strength, +23°C	**17 / 21**	kJ/m²	ISO 180/1A
Izod notched impact strength	**16 / 18**	kJ/m²	ISO 180/1A
Temperature	**-30**	°C	-

[C]: CAMPUS

Thermal properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Melting temperature, 10°C/min	**260 / ***	°C	ISO 11357-1/-3
[C] Temp. of deflection under load, 1.80 MPa	**255 / ***	°C	ISO 75-1/-2
[C] Temp. of deflection under load, 0.45 MPa	**260 / ***	°C	ISO 75-1/-2
[C] Coeff. of linear therm. expansion, parallel	**12 / ***	E-6/K	ISO 11359-1/-2
[C] Coeff. of linear therm. expansion, normal	**100 / ***	E-6/K	ISO 11359-1/-2
[C] Burning Behav. at 1.5 mm nom. thickn.	**HB / ***	class	IEC 60695-11-10
Thickness tested	**1.5 / ***	mm	-
[C] Burning Behav. at thickness h	**HB / ***	class	IEC 60695-11-10
Thickness tested	**0.8 / ***	mm	-
Glow Wire Flammability Index (GWFI)	**675**	°C	IEC 60695-2-12
GWFI - thickness tested (1)	**0.75**	mm	-
Glow Wire Flammability Index (GWFI)	**675**	°C	IEC 60695-2-12
GWFI - thickness tested (2)	**1.5**	mm	-
Glow Wire Flammability Index (GWFI)	**960**	°C	IEC 60695-2-12
GWFI - thickness tested (3)	**3**	mm	-
Glow Wire Ignition Temperature (GWIT)	**700**	°C	IEC 60695-2-13
GWIT - thickness tested (1)	**0.75**	mm	-
Glow Wire Ignition Temperature (GWIT)	**700**	°C	IEC 60695-2-13
GWIT - thickness tested (2)	**1.5**	mm	-
Glow Wire Ignition Temperature (GWIT)	**750**	°C	IEC 60695-2-13
GWIT - thickness tested (3)	**3**	mm	-
ASTM Data			
UL 94 Flame rating	**HB**	-	UL 94
Thickness tested	**0.75**	mm	-

[C]: CAMPUS

Electrical properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Volume resistivity	**1E10 / -**	Ohm*m	IEC 62631-3-1
[C] Electric strength	**20 / -**	kV/mm	IEC 60243-1

[C] Comparative tracking index	**500 / -**	-	IEC 60112
ASTM Data			
Arc Resistance	**150 / -**	s	ASTM D 495

[C]: CAMPUS

Other properties	**dry / cond**	**Unit**	**Test Standard**
[C] Water absorption	**0.5 / ***	%	Sim. to ISO 62
[C] Humidity absorption	**1.2 / ***	%	Sim. to ISO 62
[C] Density	**1580 / -**	kg/m³	ISO 1183

[C]: CAMPUS

Processing Recommendation Injection Molding	**Value**	**Unit**	**Test Standard**
Pre-drying - Temperature	**80**	°C	-
Pre-drying - Time	**4**	h	-
Melt temperature	**285 - 305**	°C	-
Mold temperature	**65 - 95**	°C	-
Zone 1	**280 - 310**	°C	-
Zone 2	**280 - 310**	°C	-
Zone 3	**280 - 310**	°C	-
Nozzle temperature	**280 - 310**	°C	-

Characteristics

Processing
Injection Molding

Delivery form
Pellets, Natural Color

Additives
Lubricants, Release agent

Special Characteristics
Heat stabilized or stable to heat

Features
Creep Resistance, Fatigue Resistance, Thermal Stability

Chemical Resistance
General Chemical Resistance, Solvent Resistance, Hydrolytically Stable, Oil Resistance, Oxidation Resistance

Certifications
Food contact, Food approval 10/2011, Food approval FDA 21 CFR

Applications
Automotive, Electrical and Electronical, General Purpose

Regional Availability
North America, Europe, Asia Pacific